

IN THE SPECIFICATION:

✓ Please amend the specification as follows:

On page 4, second full paragraph beginning at line 14, bridging pages 4 and 5:

81 It has heretofore been known that a metal selected from Group ~~VIII~~8 elements, Group ~~IX~~9 elements, and Group ~~X~~10 elements in the periodic table (according to Nomenclature of Inorganic Chemistry, Revised Edition, 1989, International Union of Pure and Applied Chemistry; and in the same manner in the description hereinafter) is effective as a hydrogenating catalyst to be used for the hydrogenation reaction of an unsaturated group-containing ester. However, there has been pointed out the hydrogenolysis of the unsaturated group-containing ester as the raw material, as a problem encountered in the method using such a metal-type catalyst. More specifically, it is known that when an allyl-type ester represented by the following formula (1) or an enol-type ester represented by the following formula (2) is hydrogenated in the presence of a catalyst containing a metal selected from Group ~~VIII~~8 elements, Group ~~IX~~9 elements, and Group ~~X~~10 elements to thereby produce a saturated ester, the hydrogenolysis of the unsaturated group-containing ester as the raw material occurs so as to produce the corresponding carboxylic acid and alkane as by-products ("Catalytic Hydrogenation-Applications to Organic Synthesis" (1st edition, 1st printing, issued on April 10th, 1987, Tokyo Kagaku Dojin), page 116 et seq., may be referred to).

On page 11, the second full paragraph, beginning at line 11:

ε²
The present inventors have further performed earnest studies while directing their attention to a hydrogenating catalyst to be used for the hydrogenation reaction (especially, to various parameters of the catalyst) of an unsaturated group-containing ester. As a result, the present inventors have found that the hydrogenated ester can be produced at a high yield with little decomposition of the unsaturated group-containing ester as a raw material, when a catalyst to be used for hydrogenating an unsaturated group-containing ester to produce a corresponding hydrogenated ester contains at least one metal selected from the group consisting of Group ~~VIII~~ 8 elements, Group ~~IX~~ 9 elements, and Group ~~X~~ 10 elements in the periodic table and has an acidity of 1.0×10^{-1} mmol/g or less as measured by an ammonia-Temperature Programmed Desorption method (hereinafter referred to as "TDP method").

On page 11, the paragraph bridging pages 11 and 12:

ε³
The hydrogenating catalyst according to a further embodiment of the present invention is a hydrogenating catalyst to be used for hydrogenating an unsaturated group-containing ester represented by the following formula (1) to thereby produce a hydrogenated ester represented by the following formula (2), which contains at least one metal selected from the group consisting of Group ~~VIII~~ 8 elements, Group ~~IX~~ 9 elements, and Group ~~X~~ 10 elements in the periodic table and has an acidity of 1.0×10^{-1} mmol/g or less.

On page 12, the first full paragraph, beginning at line 27:

ε⁴
Heretofore, it has not been known that the acidity of such a hydrogenating catalyst containing at least one metal selected from the group consisting of Group ~~VIII~~ 8 elements, Group

§4
Contd
~~IX-9~~ elements, and Group ~~X-10~~ elements in the periodic table is lowered so as to effectively suppress both of the hydrogenolysis reactions to be caused at the time of the hydrogenation reaction in the case of an enol-type ester and in the case of an allyl-type ester, and to enable the hydrogenation reaction thereof at a high selectivity factor.

✓ On page 20, the paragraph bridging pages 20 and 21:

§5
As the catalyst to be used in producing the corresponding hydrogenated ester from the unsaturated group-containing ester according to the present invention, it is preferred to use a catalyst comprising an element selected from Group ~~VIII-8~~ elements, Group ~~IX-9~~ elements, or Group ~~X-10~~ elements of the periodic table (according to Nomenclature of Inorganic Chemistry, Revised Edition, 1989, International Union of Pure and Applied Chemistry; the same in the description appearing hereinafter). Specific examples of the element selected from Group ~~VIII-8~~ elements, Group ~~IX-9~~ elements and Group ~~X-10~~ elements of the periodic table may include, e.g., iron, ruthenium, osmium, cobalt, rhodium, iridium, nickel, palladium and platinum. Preferred examples of the element may include palladium, rhodium, ruthenium, and nickel. Among them, palladium, rhodium, and rhuthenium are preferred.

✓ On page 21, the first full paragraph, beginning at line 15:

§6
As the raw material compound containing the metal component selected from these Group ~~VIII-8~~ elements, Group ~~IX-9~~ elements and Group ~~X-10~~ elements of the periodic table, it is general to use a salt of a mineral acid such as nitric acid, sulfuric acid, and hydrochloric acid, but it is also possible to use a salt of an organic acid such as acetic acid, a hydroxide, an oxide or a complex salt.

☒ On page 22, the paragraph bridging pages 22 and 23:

87
Among the catalysts carried on a carrier, it is particularly preferred to use an element (or a compound containing such an element) which is selected from the Group ~~VIII~~8 elements, Group ~~IX~~9 elements, and Group ~~X~~10 elements of the periodic table, and is carried on an alumina carrier. The element selected from the Group ~~VIII~~8 elements, Group ~~IX~~9 elements, and Group ~~X~~10 elements of the periodic table may particularly preferably be palladium, rhodium, or ruthenium.

☒ On page 23, the first full paragraph, beginning at line 8:

88
In the process for producing the hydrogenated ester according to the present invention, in view of more effective suppression of the hydrogenolysis reaction, in the catalyst containing an element selected from the Group ~~VIII~~8 elements, Group ~~IX~~9 elements and Group ~~X~~10 elements of the periodic table, the catalyst may preferably have an acidity of 1.0×10^{-1} mmol/g or less in terms of the acidity which has been measured by the ammonia-Temperature Programmed Desorption method (hereinafter abbreviated as "TPD method").

☒ On page 25, the second full paragraph, beginning at line 20:

89
The hydrogenating catalyst having the above-mentioned specific acidity may preferably contain at least one metal selected from Group ~~VIII~~8 elements, Group ~~IX~~9 elements, and Group ~~X~~10 elements in the periodic table. Specific examples of the metal may include: iron, ruthenium, and osmium, which are Group ~~VIII~~ elements, cobalt, rhodium and irridium, which are Group ~~IX~~9 elements; and nickel, palladium, and platinum, which are Group ~~X~~10 elements,

89
Cont'd
but the metal is not limited to these examples. Preferably, the metal is at least one metal selected from palladium, rhodium, and ruthenium.

On page 30, the 3rd full paragraph, beginning at line 20:

810
In the present invention, the amount of the metal component selected from the Group ~~VIII~~8 elements, Group ~~IX~~9 elements, and Group ~~X~~10 elements in the periodic table which is to be carried on a carrier is not particularly limited. However, in view of the cost and catalytic activity of the metal selected from Group ~~VIII~~8 elements, Group ~~IX~~9 elements, and Group ~~X~~10 elements in the periodic table, it is preferred to adjust the amount of the metal in the range of 0.01-20 mass %, more preferably 0.1-10 mass %, based on the entire mass of the catalyst.

On page 76, the first full paragraph, beginning at line 5:

811
According to another embodiment of the present invention, an unsaturated group-containing ester represented by the general formula (1) is hydrogenated in the presence of a specific catalyst, i.e., a hydrogenating catalyst having an acidity of 1.0×10^{-1} mmol/g or less as measured by the ammonia-TPD method and containing at least one metal selected from the group consisting of Group ~~VIII~~8 elements, Group ~~IX~~9 elements, and Group ~~X~~10 elements in the periodic table, whereby the amount of carboxylic acid generated by the hydrogenolysis can be decreased extremely, and the unsaturated group-containing ester can be converted into a hydrogenated ester at a high conversion rate and with a high yield.